VOL. 475 JOURNAL OF CHROMATOGRAPHY JULY 28, 1989

CONTENTS

(Abstracts/Contents Lists published in Analytical Abstracts, ASCA, Biochemical Abstracts, Biological Abstracts, Chemical Abstracts, Chemical Titles, Chromatography Abstracts, Current Contents/Physical, Chemical & Earth Sciences, Current Contents/Life Sciences, Deep-Sea Research/Part B: Oceanographic Literature Review, Excerpta Medica, Index Medicus, Mass Spectrometry Bulletin, PASCAL-CNRS, Referativnyi Zhurnal and Science Citation Index)

INTERNATIONAL SYMPOSIUM ON CHROMATOGRAPHY, REHOVOT, NOVEMBER 14–17, 1988

Study of the representation of competitive isotherms and of the intersection between adsorption isotherms
by B. Lin, Z. Ma, S. Golshan-Shirazi and G. Guiochon (Oak Ridge, TN, U.S.A.) 1

Microcolumn liquid chromatography of small nucleic acid constituents
by J. F. Banks, Jr. and M. V. Novotny (Bloomington, IN, U.S.A.) 13

Evaluation of nickel(II) bis[α-(heptafluorobutanoyl)terpeneketonates] as chiral stationary phases for the enantiomer separation of alkylsubstituted cyclic ethers by complexation gas chromatography
by V. Schurig, W. Bürkle, K. Hintzer and R. Weber (Tübingen, F.R.G.) 23

Occurrence of D-amino acids in food. Detection by capillary gas chromatography and by reversed-phase high-performance liquid chromatography with L-phenylalaninamides as chiral selectors
by G. Palla, R. Marchelli, A. Dossena and G. Casnati (Parma, Italy) 45

(end of symposium papers)

Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. I. Monosubstituted aromatic compounds
by R. M. Smith and C. M. Burr (Loughborough, U.K.) (Received February 13th, 1989) . 57

Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. II. Long term reproducibility of capacity factors and retention indices
by R. M. Smith and C. M. Burr (Loughborough, U.K.) (Received February 13th, 1989) . 75

Programming of pressure and mobile phase composition at constant flow-rate using a self-adjusting valve in supercritical-fluid chromatography
by S. Küppers, B. Lorenschat, F. P. Schmitz and E. Klesper (Aachen, F.R.G.) (Received March 13th, 1989) 85

Retention behaviour of some classes of pharmaceutical products on chemically modified thin-layer chromatographic plates
by J. Dingenen and A. Pluym (Beerse, Belgium) (Received March 22nd, 1989) 95

Identification of alkylbenzenes up to C_{12} by capillary gas chromatography and gas chromatography–mass spectrometry. II. Retention indices on OV-101 columns and retention–molecular structure correlations
by E. Matisová, E. Kovačičová, P. T. Ha and E. Kolek (Bratislava, Czechoslovakia) and W. Engewald (Leipzig, G.D.R.) (Received March 28th, 1989) 113

Adsorption equilibrium of hydrogen isotopes on alumina adsorbents for gas–solid chromatography
by T. Yamanishi and H. Kudo (Ibaraki-ken, Japan) (Received April 4th, 1989) 125

Studies on iodinated compounds. VI. Separation characteristics of iodohistidines on reversed-phase high-performance liquid chromatography
by M. Miyashita and S. Yamashita (Tokyo, Japan) (Received February 6th, 1989) . . . 135

(Continued overleaf)

Contents (continued)

Evaluation of small diameter capillary columns for gas chromatography
by G. P. Cartoni, G. Goretti, B. Neri and M. V. Russo (Rome, Italy) (Received March 14th, 1989) 145

Design and synthesis of a chiral stationary phase containing a benz[*de*]isoquinolinone skeleton. I. First chromatographic results
by M. Sallé, A. Tambuté and A. Bégos (Vert-le-Petit, France) (Received March 13th, 1989) 153

High-performance chromatofocusing of proteins on agarose columns. I. Macroporous 15–20 μm beads
by S. Hjertén and J.-P. Li (Uppsala, Sweden) (Received March 14th, 1989) 167

High-performance chromatofocusing of proteins on agarose columns. II. Deformed non-porous 12–15 μm beads
by S. Hjertén, J.-P. Li and J.-L. Liao (Uppsala, Sweden) (Received March 14th, 1989) . . 177

Hydrolyzed macroporous glycidyl methacrylate–ethylene dimethacrylate copolymer with narrow pore size distribution. A novel packing for size-exclusion high-performance liquid chromatography
by T. B. Tennikova, D. Horák and F. Švec (Prague, Czechoslovakia) and M. B. Tennikov, E. E. Kever and B. G. Belenkii (Leningrad, U.S.S.R.) (Received March 31st, 1989) . . . 187

Polymer-based packing materials with alkyl backbones for reversed-phase liquid chromatography. Performance and retention selectivity
by N. Tanaka, T. Ebata, K. Hashizume, K. Hosoya and M. Araki (Kyoto, Japan) (Received March 29th, 1989) 195

Ion chromatography on methacrylate ion exchangers
by J. Hradil and F. Švec (Prague, Czechoslovakia) and A. A. Aratskova, L. D. Beljakova, V. I. Orlov and Ya. I. Yashin (Moscow, U.S.S.R.) (Received March 14th, 1989) 209

Improved high-speed counter-current chromatograph with three multilayer coils connected in series. I. Design of the apparatus and performance of semipreparative columns in 2,4-dinitrophenyl amino acid separation
by Y. Ito, H. Oka and J. L. Slemp (Bethesda, MD, U.S.A.) (Received April 4th, 1989) . . 219

Improved method for continuous UV monitoring in high-speed counter-current chromatography
by H. Oka and Y. Ito (Bethesda, MD, U.S.A.) (Received March 28th, 1989) 229

Gas chromatographic detection by electron impact-induced fluorescence spectrometry of molecular fragments
by L. F. Guilbault, R. Hohmann and E. L. Wehry (Knoxville, TN, U.S.A.) (Received March 13th, 1989) 237

Radiolytic synthesis of high-molecular-weight alkanes for chromatographic characterization and identification purposes
by D. Stienlet, A. Vervloessem and J. Ceulemans (Leuven, Belgium) (Received March 14th, 1989) 247

Preparation, stability and quantitative analysis by gas chromatography and gas chromatography–electron impact mass spectrometry of *tert.*-butyldimethylsilyl derivatives of some alkylphosphonic and alkyl methylphosphonic acids
by J. G. Purdon, J. G. Pagotto and R. K. Miller (Ottawa, Canada) (Received March 9th, 1989) 261

Identification of some human urinary metabolites of the intoxicating beverage kava
by A. M. Duffield, D. D. Jamieson, R. O. Lidgard, P. H. Duffield and D. J. Bourne (Kensington, Australia) (Received March 6th, 1989) 273

Carrier ampholyte-mediated oxidation of proteins in isoelectric focusing
by G. Cossu, M. G. Pirastru and M. Satta (Sassari, Italy) and M. Chiari, C. Chiesa and P. G. Righetti (Milan, Italy) (Received March 20th, 1989) 283

Preparative protein purification in a multi-compartment electrolyser with immobiline membranes
by P. G. Righetti (Milan, Italy), E. Wenisch (Vienna, Austria) and M. Faupel (Basle, Switzerland) (Received March 23rd, 1989) 293

High-performance liquid chromatographic analysis of fluorescent derivatives of adenine and adenosine and its nucleotides. Optimization of derivatization with chloroacetaldehyde and chromatographic procedures
by S. Sonoki, Y. Tanaka, S. Hisamatsu and T. Kobayashi (Kanagawa, Japan) (Received April 10th, 1989) 311

Reversed-phase thin-layer and high-performance liquid chromatography of aromatic alkoxy and hydroxy acids
by M. Bidló-Iglóy (Budapest, Hungary) (Received April 4th, 1989) 321

Ion chromatographic determination of nitrite in the presence of a large amount of chloride
by P. Pastore, I. Lavagnini, A. Boaretto and F. Magno (Padova, Italy) (Received March 23rd, 1989) 331

High-performance liquid chromatographic analysis of aldehydes at trace level as their 3-methylbenzothiazolone azine derivatives
by G. Chiavari, M. C. Laghi and G. Torsi (Bologna, Italy) (Received March 21st, 1989) . 343

Isolation of drug residues from tissues by solid phase dispersion
by S. A. Barker, A. R. Long and C. R. Short (Baton Rouge, LA, U.S.A.) (Received April 17th, 1989) 353

Purification of rabbit liver aldehyde oxidase by affinity chromatography on benzamidine Sepharose 6B
by J. G. P. Stell, A. J. Warne and C. Lee-Woolley (Bradford, U.K.) (Received March 20th, 1989) 363

Extraction of butyltin species and their gas chromatographic determination as chlorides in a sediment certified reference material for trace metals, PACS-1
by K. W. M. Siu, P. S. Maxwell and S. S. Berman (Ottawa, Canada) (Received April 6th, 1989) 373

Stability-indicating capillary gas–liquid chromatographic assay of dicyclomine hydrochloride in some pharmaceutical formulations
by H. S. I. Tan and Ya.-P. Yan (Cincinnati, OH, U.S.A.) and A. P. Thio (Lexington, KY, U.S.A.) (Received April 12th, 1989) 381

Electrochemical detection of mercapturic acid derivatives after separation by high-performance liquid chromatography
by T. Toyo'oka, T. Suzuki, Y. Saito and A. Takahashi (Tokyo, Japan) (Received February 9th, 1989) 391

Notes

Studies on 1-(2-phenethyl)-4-(N-propionylanilino)piperidine (fentanyl) and related compounds. III. Effect of methyl group introduction into fentanyl on sensitivity enhancement in gas chromatography with surface ionization detection
by S.-I. Suzuki (Tokyo, Japan), H. Tsuchihashi (Osaka, Japan) and H. Arimoto (Kyoto, Japan) (Received April 6th, 1989) 400

Isocratic separation of seven benzimidazole anthelmintics by high-performance liquid chromatography with photodiode array characterization
by A. R. Long, L. C. Hsieh, C. R. Short and S. A. Barker (Baton Rouge, LA, U.S.A.) (Received April 18th, 1989) 404

Adsorbability to and desorbability from Sephadex G-15 of sodium and phosphate ions
by T. Okada, M. Miyakoshi and M. Inoue (Ishikawa, Japan) (Received March 29th, 1989) 412

(Continued overleaf)

Contents (continued)

Simultaneous analysis of different species involved in hexaglycine hydrolysis
by D. S. Kalonia, S. Musunuri and J. Tanglertpaibul (Storrs, CT, U.S.A.) (Received February 21st, 1989) 416

Liquid chromatographic determination of planar aromatic sulphur compounds in crude oil
by S. Sinkkonen (Jyväskylä, Finland) (Received April 4th, 1989) 421

High-performance liquid chromatography of long chain 7-oxo alcohols, acids and their esters
by S. Husain, G. Pratap and R. N. Rao (Hyderabad, India) (Received April 6th, 1989) . . 426

Residue analysis of the herbicides cyanazine and bentazone in sugar maize and surface water using high-performance liquid chromatography and an on-line clean-up column-switching procedure
by E. A. Hogendoorn and C. E. Goewie (Bilthoven, The Netherlands) (Received April 10th, 1989) 432

Ion-pair chromatographic separation of inorganic sulphur anions including polysulphide
by R. Steudel, G. Holdt and T. Göbel (Berlin, F.R.G.) (Received March 17th, 1989) . . . 442

High-performance liquid chromatographic determination of the alkaloids in betel nut
by J. L. Huang and M. J. McLeish (Parkville, Australia) (Received March 10th, 1989) . . 447

Adsorption chromatography on cellulose. V. A simple chromatographic system for the identification of inks
by M. Lederer and M. Schudel (Lausanne, Switzerland) (Received March 7th, 1989) . . . 451

Measurement of hydroperoxydocosahexaenoic acid in rat brain homogenates by reversed-phase high-performance liquid chromatography
by K. A. Ansari and D. W. Shoeman (Minneapolis, MN, U.S.A.) (Received February 10th, 1989) 457

Isolation of hydroxy fatty acids from livers of carbon tetrachloride-treated rats by thin-layer chromatography
by Z. L. Bandi and G. A. S. Ansari (Galveston, TX, U.S.A.) (Received April 25th, 1989) . 461

Author Index 467

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)